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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,594	09/05/2003	Radislav A. Potyrailo	RD-28750-1	7960
6147 7590 09/26/2007 GENERAL ELECTRIC COMPANY GLOBAL RESEARCH PATENT DOCKET RM. BLDG. K1-4A59 NISKAYUNA, NY 12309			EXAMINER NAGPAUL, JYOTI	
			ART UNIT 1743	PAPER NUMBER
			MAIL DATE 09/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/656,594

Applicant(s)

POTYRAILO ET AL.

Examiner

Jyoti Nagpaul

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29,30 and 33-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-30 and 33-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment filed on July 23, 2007 has been acknowledged. Claims 29-30 and 33-42 are pending.

Response to Amendment

Rejection of Claims 29-41 as being unpatentable over Berger in view of Grate, Abraham and McGill (Submission by Applicant) has been modified in light of applicants amendments.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 29-30 and 33-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Grate, Abraham and McGill (Submission by Applicant).

Berger teaches protective coatings for semiconductors and other electronic devices. The coating has a thickness of about 0.1 nanometers to about 100 micrometers. (See Col. 62, Lines 40-44) Additionally, Berger teaches the coating comprises at least a first segment and a second segment. The first segment is a polyimide and the second segment is a polysiloxane. (See various examples and Col. 39, Lines 50-60) Berger further teaches polyimide is formed by the reaction of a dianhydride with a diamine. (See Col. 14, Lines 50-51) With respect to Claims 37-40, it is inherent that Berger teaches dianhydride and diamine having the various structure formulas as claimed because the formation of polyimide is present in the teachings of Berger. With respect to Claim 32, Berger teaches polyimides containing the siloxane unit can be processed quite readily since they have much lower glass transition temperature. Specifically, Berger discloses the glass transition temperature being on the order of 140 degrees Celsius so they will melt and flow more readily. (See Col. 29, Lines 50-60)

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Berger fails to explicitly teach the coating has a partition coefficient of greater than or equal to about 10^5 towards at least one analyte. Berger also fails to explicitly teach the first segment has a glass transition greater than or equal to about 23 degrees Celsius and the second segment has a glass transition temperature of less than 23 degrees Celsius.

Grate, Abraham and McGill teaches partition coefficients of thin films for use in electronic devices. Partition coefficients are a function of concentrations of vapor in the sorbent and gas or vapor phase. (See pgs 595-601)

Thus, it would have been obvious to a person of ordinary skill in the art to modify the device of to provide the coating of Berger having a partition coefficient of or equal to about 10^5 towards at least one analyte in order to increase absorption of the analyte of interest as disclosed in Grate, Abraham and McGill.

With regards to the teachings on glass transition temperatures as disclosed above in Berger, it would have been obvious to a person of ordinary skill in the art to modify the device of to provide the first segment/polyimide has a glass transition greater than or equal to about 23 degrees Celsius and the second segment/siloxane has a glass transition temperature of less than 23 degrees Celsius in order to facilitate processing and fabrication of high molecular weight materials and increase permeability to gases as disclosed in Berger. (See Col. 14, Lines 23-34)

Response to Arguments

Applicant's arguments filed on July 23, 2007 have been fully considered but they are not persuasive. Applicants argue that Grate, Abraham and McGill do not teach the

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claimed glass transition temperature ranges for the segments. Examiner has relied on Berger for the teaching of glass transition temperatures. Berger teaches that polyimides containing the siloxane unit can be processed readily since they have much lower glass transition temperatures. Refer above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Nagpaul whose telephone number is 571-272-1273. The examiner can normally be reached on Monday thru Friday (8:00-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JN


Jill Warden
Supervisory Patent Examiner
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